

What is claimed is:

1. A fuel cell system comprising:
a fuel cell having an anode, a cathode and an electrolyte
film put therebetween;
5 a fuel supply unit supplying fuel to the anode; and
a gas supply unit having a pump, the pump giving negative
pressure to the cathode so as to introduce gas containing oxidant
to the cathode.
2. The fuel cell system of claim 1, wherein the pump gives
10 negative pressure further to the anode so as to supply fuel
to the anode.
3. The fuel cell system of claim 2, wherein the pump is
further connected to the fuel supply unit so as to give positive
pressure to the fuel supply unit and to supply fuel to the
15 anode.
4. The fuel cell system of claim 1, wherein the pump is
further connected to the fuel supply unit so as to give positive
pressure to the fuel supply unit and to supply fuel to the
anode.
- 20 5. A fuel cell system comprising:
a fuel cell having an anode, a cathode and an electrolyte
film put therebetween;
a fuel supply unit supplying fuel to the anode;
a gas supply unit having a pump introducing gas containing
25 oxidant to the cathode; and
an exhaust flow path communicating the cathode and the

fuel supply unit so that the pump gives positive pressure to the fuel supply unit through the exhaust flow path.

6. The fuel cell system of claim 5, wherein the pump is disposed downstream of the cathode.

5 7. The fuel cell system of claim 5, wherein the pump is disposed upstream of the cathode.

8. The fuel cell system of claim 5, wherein the fuel supply unit comprises a mixing buffer tank.

9. The fuel cell system of claim 8, wherein the mixing buffer
10 tank is connected to the exhaust flow path so as to mix an exhaust gas with the fuel.

10. The fuel cell system of claim 5, further comprising a flow sensor detecting a flow rate of the fuel supplied to the anode and a controller controlling the positive pressure added
15 to the fuel supply unit on the basis of the flow rate detected by the flow sensor.

11. The fuel cell system of claim 8, further comprising a flow sensor detecting a flow rate of the fuel supplied to the anode and a controller controlling pressure in the mixing buffer
20 tank on the basis of the flow rate detected by the flow sensor.

12. The fuel cell system of claim 5, further comprising a pressure sensor detecting pressure of the fuel supplied to the anode and a controller controlling the positive pressure added to the fuel supply unit on the basis of the pressure
25 detected by the pressure sensor.

13. The fuel cell system of claim 8, further comprising a

pressure sensor detecting pressure of the fuel supplied to the anode and a controller controlling pressure in the mixing buffer tank on the basis of the pressure detected by the pressure sensor.

5 14. A fuel cell system comprising:

a fuel cell having an anode, a cathode and an electrolyte film put therebetween;

a fuel supply unit supplying fuel to the anode;

a gas supply unit introducing gas containing oxidant
10 to the cathode;

an exhaust flow path from the anode and the cathode;

a first switching valve openable and closable of the exhaust flow path; and

a power switch switching power supply of the fuel cell,

15 wherein the first switching valve is switched along with the power switch.

15. The fuel cell system of claim 14, further comprising a tilt sensor detecting a tilt of the fuel cell, the first switching valve being closed when detecting the tilt.

20 16. A fuel cell system comprising:

a fuel cell having an anode, a cathode and an electrolyte film put therebetween;

a fuel supply unit supplying fuel to the anode;

a gas supply unit introducing gas containing oxidant
25 to the cathode;

a second switching valve openable and closable of the

fuel supply unit; and

a power switch switching power supply of the fuel cell,
wherein the second switching valve is switched along
with the power switch.

5 17. The fuel cell system of claim 16, further comprising
a tilt sensor detecting a tilt of the fuel cell, the second
switching valve being closed when detecting the tilt.

18. A fuel cell system comprising:

a fuel cell having an anode, a cathode and an electrolyte
10 film put therebetween;

a fuel supply unit supplying fuel to the anode;

a gas supply unit introducing gas containing oxidant
to the cathode;

an exhaust flow path from the anode and the cathode;

15 a first switching valve openable and closable of the
exhaust flow path;

a second switching valve openable and closable of the
fuel supply unit; and

a power switch switching power supply of the fuel cell,

20 wherein at least one of the first switching valve and
the second switching valve is switched along with the power
switch.

19. The fuel cell system of claim 18, wherein both the first
switching valve and the second switching valve are switched
25 along with the power switch.

20. The fuel cell system of claim 18, further comprising

a tilt sensor detecting a tilt of the fuel cell, at least one of the first switching valve and the second switching valve being closed when detecting the tilt.

21. The fuel cell system of claim 20, wherein both the first
5 switching valve and the second switching valve are closed when the tilt sensor detects the tilt of the fuel cell.